



1984

Number of Sessions and Psychotherapy Outcome: Impact on Community Mental Health Center Services

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NUMBER OF SESSIONS AND PSYCHOTHERAPY OUTCOME:
IMPACT ON COMMUNITY MENTAL HEALTH CENTER SERVICES

by
Joanne M. May

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
February
1984

ACKNOWLEDGEMENTS

A dissertation must be considered the work of many individuals. I would like to thank those persons who made this work possible:

Emil J. Posavac who directed this dissertation - for positive critique and guidance;

Fredrick L. Newman whose ideas dramatically shaped my own - for his quiet cajoling support and consistent challenges for me to do better;

Alan DeWolfe and Daniel Barnes - for their sage counsel and encouragement;

the staff of the Edgewater Uptown Community Mental Health Center and in particular the Sheridan Professional Center - for support which was invaluable to this project;

Margaret and Arnold May - for being the best of all possible parents;

Thomas Pollock, my husband - for his understanding and the sustenance provided throughout what seemed at times an insurmountable task; and

other family members and special friends who have provided encouragement in their own ways.

The author Joanne M. May is the eldest child of the six born to Margaret Mary (Fosket) and Arnold Nicholas May. She was born on August 13, 1949 on Staten Island, New York.

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The psychology of why customers tip. Institutions, October, 15, 1979.

Tipping Behavior. Cornell Hotel and Restaurant Management Quarterly, February, 1980.

From January 1980 to the present she has been employed as an Associate Director of the Edgewater Uptown Community Mental Health Center where she supervises outpatient services for the crisis intervention, ethnic, adult and childrens' programs.

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INTRODUCTION

The expectation regarding psychotherapy within a community mental health center is that it should produce the same benefits as those described in psychotherapy outcome studies. However unlike the subjects of typical outcome studies, a majority of community mental health center clients discontinue treatment in less than six sessions. These clients have been described as "premature terminators" and/or "psychotherapy dropouts". However the labels of premature terminator or psychotherapy dropout (PT/PD) are terms that connote an absence of meaningful therapeutic gains and, as such, may not be accurate descriptors of the therapeutic process. The present study addresses the issue of the perception of the client relative to the perception of the changes that psychotherapy in community mental health is supposed to effect as seen through public mandates and historical perspective. Recent studies of psychotherapy research have found a dearth of correspondence between how clients and therapists perceive the quality of helping behavior (Elliott, Stiles, Shiffman, Barker, Burstein, & Goodman, 1983; Gurman, 1977; Lambert, DeJulio, & Stein, 1978) and the success of psychotherapy (Shapiro, Struening, Shapiro, & Barten, 1976). Thus it is inevitable that when client and therapist enter into a therapeutic relationship there may be a significant difference in not only the perception of therapeutic process, but in judgement as to the eventual outcome of the therapeutic process. In a review of psychological literature on helping behavior it becomes apparent that there are two distinct frameworks from which to analyze helping behavior—one framework, based on social psychological research (attribution theory) addresses the issues posed by the divergent perceptions of the participants involved (client and therapist);

while the other framework, based on research in clinical psychology, addresses fundamental issues regarding the efficacy of the therapeutic process.

These conceptual frameworks may be even more isolated from one another than anticipated because of the context in which previous research has been conducted. In general, while attribution research has been conducted in academic settings, psychotherapy outcome research has been done in private practice settings. Furthermore both attribution and clinical research are only infrequently done in community mental health center (CMHC) settings—this in spite of the fact that CMHCs are the primary resource for the nation's mental health care (Kalafat & Neigher, 1983). Thus it would seem important to build a conceptual bridge—one that will link the theoretical constructs of attribution and psychotherapy outcome as well as one that will link previous research efforts to CMHC settings where a significant proportion of the mental health services in this country are rendered. To this end, although the present research effort is a psychotherapy outcome study, the literature review will also focus not only on psychotherapy research but on how attributional models of helping behavior impact the phenomena of premature termination in community mental health center settings.

The terms "premature terminator" or alternatively, "psychotherapy dropout" are labels used by mental health professionals to describe clients who terminate their treatment after a relatively brief period of time. This situation where pejorative terms represent accepted professional jargon is a rather singular one since the present climate in the field of human services is one where "labeling" clients with descriptors that may not be valid or

reliable is actively discouraged (Rosenhan, 1973). However it would appear that while professionals usually exercise great caution when assigning a diagnostic label to a client, professionals routinely use terms that convey a distinctly negative view of the client's behavior when referring to a particular subgroup of clients who fail to continue in therapy as long as the helping professional deems necessary. A less value laden approach would be to identify the client who does not remain in treatment as long as the therapist recommends or expects, as an "early terminator".

The terms "premature terminator" and "psychotherapy dropout" seem to have evolved from the assumption that these clients show little or no improvement and as such may be regarded as treatment failures (Strupp, 1978). For example, Greenson (1967) posited that when a client considers terminating treatment after a relatively brief period that the behavior should be interpreted as resistance since "intense and prolonged hateful reactions toward the analyst should emerge and be analyzed before one should think of terminating" (p. 235). Alternatively, Meltzoff and Kornreich (1971) suggest "that a more sophisticated approach to premature termination involves the exploration of the therapist and treatment situation to which the patient may be responding" (p. 373). Regardless of whether responsibility for the early termination is assigned to the client or to the therapist, a summary of the prevailing view regarding the therapeutic benefit to be derived by PTs/PDs is summarized by Lee (1980):

Premature termination of psychotherapy by a client presents human service providers with problems from two perspectives. First, premature termination represents service inefficiency in that staff time devoted to clients who terminate or drop out prematurely fails to produce meaningful outcomes and represents an improvident effort. Additionally, considerable evidence indicates that the length of stay in treatment is positively

related to treatment gains. Consequently, premature terminators do not experience optimal gains, if, in fact they experience any gain at all (p. 9).

Yet the phenomenon of early termination in Community Mental Health Centers (CMHCs) has been well-documented. The prevailing assumption that early terminators make minimal therapeutic gains is a particularly damning assertion when one examines the modal length of stay within the community mental health center system. Twenty years after the passage of the original legislation and more than 600 Centers later, the median number of visits varies between one and six visits depending on the study cited with a modal length of stay of four visits.

Although it is often presumed that early termination is synonymous with treatment failure, there have been few attempts to secure research data that would support or refute the supposition that somehow the early terminator does not benefit from therapeutic contact. In an age of increasingly scarce resources, the CMHC system is battling for fiscal survival and is highly vulnerable to those who point to a dearth of empirical evidence to demonstrate the therapeutic efficacy of community mental health services. This study examines the issues of whether clients of an outpatient mental health clinic experience change as a result of brief contact and if so, whether these changes are somehow different for clients who have extended contact.

In order to understand why prevailing assumptions regarding early termination have received such wide acceptance it is important to review the environmental context within which the phenomena (early termination) is being observed. Since outpatient mental health care is provided, in the main, by community mental health centers, it is essential to understand the issues that

historically and presently influence the philosophy, quantity and quality of services rendered. Thus the literature review begins with an examination of the community mental health center movement in historical perspective. This movement raises certain sets of expectations for psychotherapeutic treatment within community mental health centers. Thus the following section embarks upon a discussion of the psychotherapy outcome literature and describes what might be reasonable expectations. Finally, there is a review of the literature describing clinicians' causal attributions of clients' problems and potential for change. Together these three aspects: the therapeutic setting (CMHCs); the potential for psychotherapeutic treatment; and the clinicians' attributions, give rise to a set of hypotheses regarding those who continue and those who discontinue treatment.

REVIEW OF RELATED LITERATURE

The CMHC Movement: Expectations and Passages

The provision of community-based mental health services was originally articulated by the first director of the National Institute of Mental Health (Felix, 1949). He proposed the establishment of mental health clinics throughout the country. He suggested that since treatment of pulmonary tuberculosis had resulted in containing the incidence of that illness that perhaps a similar effort would help eradicate mental illness. Although primary treatment facilities for the mentally ill were large psychiatric hospitals, with the introduction of anti-psychotic medication in the 1950's the behavior management of the mentally ill was controlled through pharmacological agents and as a result, the focus was shifted from maintenance efforts to rehabilitation and treatment.

In 1963 there was a dramatic shift in social policy. Legislation creating the CMHC program was signed into law by John F. Kennedy. Public Law 88-164 (1963) authorized funds to aid communities in the construction of mental health centers. Two years later, legislation provided staffing grants to Centers that were mandated to provide treatment alternatives to hospitalization for the chronically mentally ill as well as to make mental health services available to community residents regardless of their ability to pay for those services (Public Law 89-105, 1965). The CMHC program continued to be well-funded in subsequent legislative initiatives under the

administrations of Lyndon B. Johnson, Richard M. Nixon, and James E. Carter.

Two decades later, billions of dollars have been spent to provide mental health services to millions of persons. Yet very little is known about the efficacy of the services rendered to those who have been clients of the CMHC system (Kiesler, 1982). Information regarding whether clients improved and whether they were satisfied with the services is seldom collected. So although a nationwide network of mental health services exists, basic issues regarding the efficacy of the services remain unresolved.

The absence of a body of literature supportive of community-based mental health treatment may be rooted in the fact that the original CMHC legislation outlined expectations that were clearly unrealistic for the program. The legislative paradox has been entitled "Legislative Darwinism" by one federal observer who contends that this paradox is not perpetrated solely in the Human Services but rather, it is a strategy used to confront the fact that few pieces of legislation that are introduced to the Congress survive to be enacted into law. Proponents of a given piece of legislation must villify the existing situation and offer a panacea. In the case of the CMHC legislation, in order to sell this radical departure from the medical model of treatment for mental or emotional disorders to Congress, the proponents of the legislation condemned the state psychiatric facilities as inhuman, capitalized on the charge that mental health care had been the victim of nationwide neglect and apathy and promised that community mental health centers would be able to effect extraordinary changes in the chronically mentally ill. As if that were not ambitious enough, CMHCs would accomplish these therapeutic wonders in a cost-effective manner (Feldman, Note 1).

Efforts at passage were stormy but successful. The legislation authorizing staffing grants in 1965 mandated that CMHCs would provide at minimum, five "essential services " including emergency services 24 hours a day, inpatient care, partial hospitalization, outpatient care for those experiencing emotional distress and consultation and education services; and that CMHCs would become independent of the federal government within eight years.

In the absence of clearly formulated objectives, expectations shifted to the eyes of the beholder. According to Denner (1974):

The more conservative wing of the community mental health center movement talked openly about reaching out and treating whole populations of people previously untouched by the mental health hand; and radicals saw an opportunity to launch programs that would virtually transform society, that would even up the score between the haves and the have-nots, wipe out poverty and racism, and foster community development (p. 104).

When Centers did not cause these problems to dissipate, the CMHC programming joined other major pieces of Human Services legislation which began to be perceived as failures or disappointments (e.g., Job Corps, Office of Economic Opportunity). Enthusiasm for the program began to wane. This process was intensified as: (a) it became clear that many CMHCs were battling for fiscal survival as the eighth year of funding approached and (b) there was a dearth of empirical evidence to demonstrate the therapeutic efficacy of community mental health services.

In respect to the former concern, to the dismay of the architects of the system, the community supporters of the original centers approached their eighth year of funding with trepidation since many Centers could not support themselves and the federally mandated programs were not necessarily a priority for state departments of mental health. Usually the state agencies

would rank the importance of programs targeting the chronically mentally ill but did not define as their responsibility (as the federal legislation had) the provision of mental health services to the emotionally disturbed, to ethnic populations, the aged, children and others. Thus as Centers became "of age" they were given two conflicting messages: (a) to provide more services to the chronically mentally ill and (b) to do something to become financially independent. In order to bouy the floundering Centers, "disaster grants" were made available for up to three additional years (Public Law 94-63, 1975). Still there were Centers that declared bankruptcy (Herbert, 1978) or ceased to operate, unable to establish a local version of a federal ideal. Thus from inception there has been a gap between idea and practice, promise and performance (Feldman, 1971).

CMHCs - Impact and efficacy of mental health care. In light of the fact that public dollars are rapidly declining and there are concerns regarding the cost-effectiveness of the services (Biegel & Berren, 1981; Butcher & Koss, 1978; Carter & Newman, 1976; Garfield, 1981; Garfield & Bergin, 1978; Sherman, Note 2; Yates & Newman, 1980), many CMHC administrators and governing boards have been catalyzed to re-examine the mission of their organizations.

As evidenced by the plethora of articles which address the issue of efficacy, in the last five to eight years there has been a stark recognition that CMHCs have no criterion for success. In the private sector, survival is competitive and gross indicators of success are demonstrated by profit and return on investment. These outcomes are clear and relatively easy to assess. No comparable criteria had been established for CMHCs. In response to the demands for increased accountability, the Community Mental Health

Centers Amendments (Public Law 94-63, 1975) required that 2% of all federal funds be spent in program evaluation efforts. Subsequently, the Mental Health Systems Act (Public Law 96-398, 1980) was to have ushered in a new era in mental health accountability since the legislation proposed the use of national performance standards with which to evaluate CMHCs. However these efforts were undone as the following presidential administration dismantled federal programs and shifted responsibility for mental health care to state mental health authorities.

As a result, shortly after program evaluation technology began to be disseminated, "cutback management" became a password in human services administration. As agencies moved to deal with budget reductions, "non-essential" services were targeted for elimination. All too often program evaluation efforts headed the list.

The situation is further mediated by other constraints. As most observers would readily admit, economic conditions coupled with growing need militate against long-term psychotherapy. As noted by Budman and Gurman (1983), "we may have to increasingly think small, realistically and efficiently" (p. 279). In an effort to render services to as many as possible and at the same time remain aware of cost-effectiveness, some CMHCs have put increased emphasis on symptom amelioration/reduction and short term treatment. Agencies sought to use this strategy in order to remain viable in an era of increasingly uncertain resources (McCoy, 1980; McLean, 1981; "Symptom distress", 1981). Yet loyalty to the superiority of long-term

treatment prompted Goleman (1981) to describe the brief model of psychotherapy as a mental health version of "Reaganomics".

While the current situation is one of increasing exposure and acceptance, the mental health field is concurrently beset by the dialectic of increasing treatment expectations and declining funds. As noted by Strupp:

In our time the pressures for the development of forms of treatment that are effective, efficient, humane, and widely applicable have steadily mounted as society seeks solutions to its multifarious human problems (1978, p. 17).

An integrated approach to psychotherapy outcome research in CMHC settings is critical for the continued survival of CMHCs. To date, supporters of this system have had to rely almost exclusively on the arguments presented in classic psychotherapy research which are not particularly supportive of the efficacy of brief treatment efforts—this, in spite of the fact that brief treatment constitutes a significant proportion of the services rendered in CMHCs.

Psychotherapy Outcome as a Function of Length of Stay: A Review of the Literature

As noted by Webb, Baer and Weinman (1980):

In the late 1950's and early 1960's the relationship between number of visits and treatment outcome received considerable attention in the psychiatric literature (Garfield & Affleck, 1952; Seeman, 1954; Cartwright, 1955; Taylor, 1956; Standal & van der Veen, 1957; Graham, 1958; Cartwright, Robertson, Fiske & Kirtner, 1964; Johnson, 1965). Their investigations essentially found a positive linear relationship between number of visits and outcome. By the 1970's however, research on the relationship seemed to be of little scientific interest and the few studies that were conducted generally reconfirmed the results of

previous research (Weitz, Abramowitz, Stegle, & Calabria, 1975; Strassberg, Anchor, Cunningham, & Elkins, 1977).(p. 23)

Classic reviews that sought to identify factors that influence the outcome of psychotherapy such as those by Baekeland and Lundwall (1975) and Luborsky, Chandler, Auerbach, Cohen, and Bachrach (1971) concluded that the longer clients remain in therapy the more likely they are to achieve positive therapeutic outcomes.

In the face of what appeared to be a precept of psychotherapy, there were few attempts to secure research data to support or refute these beliefs. Thus while most investigators have tended to view the early terminator as a treatment failure, there are only isolated examples of those who have viewed these clients as post hoc successes claiming that they must have made positive gains or they would have returned for additional psychotherapy (Garfield & Kurz, 1952).

On the other hand, increased attention has been focused on the assumption that clients who have relatively few therapeutic contacts are necessarily unchanged or have experienced negative effects. The concept of negative effects was highlighted by Bergin (1966; 1971) who published a review of the literature which incorporated a re-analysis of data presented by Eysenck (1952) in which the latter researcher presented an appraisal criticizing the effectiveness of psychotherapy. In his review, Bergin offered a tentative estimate that approximately 65% of the clients who are engaged in psychotherapy show some improvement thus proposing that the improvement rate for psychotherapy clients was superior to that of untreated controls. Similarly in a meta-analysis, Smith and Glass (1977) reported that the average client exceeded on some outcome measures, 85% of the untreated controls

and thus they concluded that psychotherapy is effective. Bergin (1971) also addressed the issue of deterioration or negative effects resulting from therapeutic intervention. The prevailing view was that if psychotherapy did not effect meaningful gains, at least it did not induce harmful effects. This assumption suggests a lack of potency for psychotherapy. Bergin's concept that there may be negative effects of psychotherapy clearly implies potency for the construct and in so doing, paved the way for a propagation of critical reviews similar to that authored by Tennov (1975) entitled Psychotherapy: The Hazardous Cure.

The lack of clarity regarding treatment efficacy was further intensified by studies which documented patterns of success early in treatment followed by a "failure zone" and then another period characterized by successful outcomes. For instance Uhlenhuth and Duncan (1968) reported that outcome is biphasic since in the first one to four weeks of therapy there was a decrease in affective symptoms followed by a longer phase where a wider range of symptoms responded to treatment. Similarly Cartwright (1955) reported that the interval between 13 to 21 sessions represents a "failure zone" that is in turn followed by another period of successful outcomes beyond that. At the same time other studies documented positive outcomes up to an optimal point followed by a failure zone and/or diminishing returns with extended treatment (Cappon, 1964; Howard, Orlinsky, & Krause, Note 3; Johnson, 1969; Pruitt, 1963; Rosenthal & Frank, 1958). Most recently Smith, Glass and Miller (1980) concluded that psychotherapy outcome research indicates that the major impact of psychotherapy is in the first six to eight visits. Subsequently there is a decrease in therapeutic impact for approximately 10 sessions. These studies may suggest that clients who are

experiencing acute situational distress may derive few therapeutic gains from extended treatment and may drop out after the crisis has passed because they have experienced symptomatic relief. The perplexing state of the art is aptly reflected in the statement by Orlinsky and Howard:

More of a good thing is better than less of it; more of a bad thing is worse; and there may very well be a point of diminishing returns in any therapeutic relationship beyond which only negligible (or even retrogressive) results are attainable (1978, p. 313).

This statement is reminiscent of Colby (1964) who began his review of psychotherapeutic processes with the words "Chaos prevails", a sentiment that well may have prompted the chorus of demands by legislators and funding sources for empirical evidence that psychotherapy works. Even Congress became embroiled in the quagmire. At the request of the Senate Finance Committee whose members entertained the notion that proponents of mental health services should be able to demonstrate the safety and effectiveness of services in order to qualify for expanded coverage under Medicare, several studies were commissioned by Congress. One study (Yates & Newman, 1980) concluded that there is evidence of the effectiveness of psychotherapy and with greater emphasis on cost analysis studies, the field will be able to demonstrate the benefits of psychotherapy more convincingly (Foltz, 1980). Current efforts to develop such studies are stymied due to the reordering of priorities which reflect a disavowal of commitment to social research. Parloff (1982) observed that "to persist in the belief that mental health benefits (and associated costs) will soon be expanded requires a dazzling degree of willful optimism" (p. 720). Similarly it is unlikely that federal funds will be available to support research efforts to resolve basic

methodological and conceptual issues that require clarification and development in psychotherapy research.

Psychotherapy outcome as a function of length of stay in CMHCs.

From an applied perspective, the assumption that clients who are seen for a brief period make minimal therapeutic gains is a particularly damning assertion when one examines the length of stay within the CMHC system. The median number of sessions varies between one and six sessions depending on the study cited with a modal length of stay of four sessions (Dyer, 1978; Fiester, 1974; Fiester, Silverman, & Beech, Note 4; Garfield, 1978; Hornstra, Lubin, Lewis, & Willis, 1972; McCoy, 1980; Murphy, 1973; National Institute of Mental Health, 1970; Speer, 1979; Sue, McKinney, & Allen, 1976). This situation led Graziano and Fink (1973) to state that "It seems clear that for the majority of people who seek help, the treatment process is a decided failure"(p. 362).

The pejorative labels (PT/PD) and the negativistic attributions made underscore the pervasiveness with which mental health professionals accept the proposition that these clients represent treatment failures. Moreover a frequent and compensatory response to these findings is to devise strategies requiring significant investment of fiscal and human resources to reduce attrition and to more successfully engage clients (Addrisi, Lefkovitz, Speer, & Szumski, 1979; Garcea & Irvin, 1962; Garfield, 1978; Grolld & Hill, 1962; Maluccio & Marlow, 1974). Specific strategies include a pretherapy training to help prepare the client for therapy (Heitler, 1976), training to prepare the clinician to plan an active and more flexible role (Baum & Felzer, 1964), training to educate the client in appropriate expectations (Hoehn-Saric, Frank,

Imber, Nash, Stone, & Battle, 1964), and "vicarious therapy pre-training" (Truax & Carkhuff, 1967).

So even though there has been a positive response to mental health services and its expansion has been socially reinforced, the question of efficacy especially as it relates to length of stay in psychotherapy remains unanswered. Most research that addresses the question "Is mental health care effective?" is unidimensional in approach since efficacy is typically measured by using therapists' judgements of outcome. The resultant data is both narrowly defined and vulnerable to a number of biases which limit the internal and external validity of the results.

Attributional Models of Helping Behavior

There is social psychological research in the areas of attribution theory and judgment and decisions under uncertainty which suggest that professionals may develop strongly held beliefs about the psychotherapeutic process that are not empirically based but at the same time are difficult to alter. Research in this area was originally focused on whether determinants of behavior are personalistic, that is, due to an individual's stable disposition; or situational, that is, due to the unique environmental context in which the individual is enveloped (Epstein, 1983; Mischel & Peake, 1982). With the development of theoretical and applied interest in the perceived causes of events or behaviors, the debate whether behavior is caused by a dispositional quality of the actor (a personal disposition) or a factor in the environment (an environmental disposition) became increasingly under empirical scrutiny. Research in the area of attribution theory demonstrated that the

perceptions of the participants may differ from that of the observers in a given situation. For instance in identical situations, a participant may attribute performance to variations in task difficulty while the observer may attribute performance to variations in ability (Jones & Nisbett, 1971).

The personalistic versus situational determinents of behavior have been re-examined in terms of its impact on the practice of psychotherapy. Although some therapies are premised on unconditional positive regard (Rogers, 1951), most therapists would agree that a supportive and positively reinforcing therapeutic relationship is a fundamental aspect that will promote meaningful therapeutic gains.

Surprisingly, recent research has challenged the assumption that therapists uniformly approach their clients with positive regard. Clinicians are said to formulate an assessment of the client between the first and fourth treatment session (Meehl, 1960; Parker, 1958) and the outcome of treatment is highly correlated with the clinical impressions formulated at the initial therapeutic contact (Bishop, Sharf, & Adkins, 1975; Brown, 1970). However, Wills (1978) reports that clinicians make attributions about the causality of others' behavior to person-centered characteristics and tend to minimize the impact of the environmental determinents. In summarizing the results of several studies, Wills reports that helpers' perceptions of a given client are typified by the negative bias of the clinicians' attribution. He further found evidence that whether a therapist was able to maintain a positive regard for clients was dependent on the context of the relationship, the therapist's orientation and level of experience. In general, psychodynamic, experienced professionals in contrast to behavioral, inexperienced para-professionals tended to make personalistic attributions, to

recommend treatments of longer duration, and to have negative attitudes toward their clients.

Thus the tendency to make negative evaluations is not relegated to outcome assessment alone (PT/PD = treatment failure) because clinicians also make personalistic attributions regarding the PTs/PDs themselves. For example, Fierman (1965) reported that therapists regarded PTs/PDs as poorly motivated to receive therapeutic help; having diminished capacity for self-examination; seeking a medical model of directive intervention, or just not psychologically minded enough to benefit from psychological intervention. Similarly, Budman and Gurman (1983) state that "Minimal changes or deterioration following therapy are generally attributed to lack of patient motivation or to insufficient dosage (i.e., more treatment is needed)" (p. 280).

A comprehensive attempt to understand how attributional processes impact clinical judgments was made by Brickman, Rabinowitz, Karuza, Coates, Cohn, and Kidder (1982). They make a distinction between attribution of responsibility for a problem and attribution of responsibility for a solution. They then conceptualize four models that predict what strategies of helping behavior a person will utilize when trying to help oneself or another. Briefly, they identify a moral model where "actors are held responsible for both problems and solutions and are believed to need only proper motivation"; the compensatory model where "people are seen not as responsible for problems but responsible for solutions"; the medical model where "individuals are seen as responsible for neither problems nor solutions and are believed to need treatment"; and the enlightenment model where "actors are seen as

responsible for problems but are unable or unwilling to provide solutions and are believed to need discipline"(p. 368).

Using the models in which clients are held responsible for solutions (the compensatory and moral models), the PT/PD would be perceived in a negative light as someone who opted not to make effective use of the therapists' help. So rather than questioning one's professional competence one can assume that the client (not the therapist) was responsible for the solution. Having dropped out of therapy the client him/herself must squarely shoulder the responsibility (blame) for not having worked through to a successful therapeutic solution. It is interesting to note that Brickman et al. reinforce this perspective by identifying their preferences for the compensatory model.

Alternatively, the models in which the helpers are held responsible for solutions (the medical and enlightenment models) may evoke a different response to PTs/PDs—most particularly that of "burn-out". For instance given the pervasiveness of early termination in CMHC settings, one might address the often-overlooked impact of early termination on the morale and self-esteem of clinicians. Why do they ostensibly accept the unexpected non-return of most of their clients with relative equanimity? In spite of appearances, clinicians may indeed not be immune to the cumulative effects of investing in clients only to have them disengage quickly without evidence of having benefited from the therapeutic contact. Rebuffed, the therapists would logically struggle with the lurking suspicion that somehow they are responsible for not having successfully engaged the client in therapy. These negative beliefs are further intensified by the fact that clinicians are most

often trained in theoretical models where effectiveness is ostensibly related to length of treatment.

Thus one might make the following series of hypotheses. First, if therapists adopt a belief system that holds them responsible for the course of treatment, they are likely to experience professional self-doubt and recurrent frustration. This oft-repeated experience may impact upon staff attrition. Such non-optimal working conditions are probably part of the numbing and devastating process that results in staff burn-out. Thus these therapists may decide to leave their positions by either leaving the field altogether or by accepting an administrative position in mental health.

Alternatively, therapists who adopt a belief system in which clients are held responsible for solutions may not experience professional self-doubt or recurrent frustration. In fact, these therapists may enjoy greater job satisfaction, may remain in their positions longer and as a result, have an opportunity to increase their clinical skills. Over time the therapists' clinical abilities may become highly skilled and they will leave their positions for better ones in other settings or may be promoted within their organization to administrative positions.

Lastly, therapists who adopt a belief system in which clients are held responsible for solutions may enjoy a high degree of job satisfaction and may remain in their positions longer, but these same therapists may also stagnate in terms of their clinical skills and remain in their positions over time

because they are not competitively qualified for other, more challenging positions.

However, currently we have no data with which to test the above hypotheses although Etzioni (1964) suggests that those who leave an organization tend to be the better performers. Yet these possibilities have implications for human resource development because skilled clinicians are developed through long years of training and thus are often difficult to locate and equally difficult to replace. This is especially important in CMHCs where estimates are that 80% of agency budgets are invested in human efforts (Levin, 1975; Yates, Haven, & Thorensen, 1979). Thus from the perspective of organizational effectiveness, it makes a major difference whether CMHCs are able to keep high-performing employees. If the organization is disproportionately losing high performance employees because of job stressors and/or incongruence between professional expectations and job realities, then it is likely that the ability of the organization to achieve its goals and the quality of client care will be adversely affected.

In summary, a therapist's valuation of outcome is not, as is often assumed, necessarily an objective, data-based judgement. Rather it is a clinical judgement which will vary as a function of which participants (clients or therapists) are assigned responsibility (blame) for the outcome of treatment. The above discussion highlights the necessity for congruence of expectations among the participants (clients, therapists, administrators, funding sources), and certainly emphasizes the need to actively incorporate

the client's expectations of therapy into treatment planning and psychotherapy research.

The impact of client expectations on length of stay and perceived therapeutic outcome. It is unfortunate that most of the research on psychotherapy outcome focuses on the client who remains in treatment for an extended period of time because there is increasing evidence that those clients on whom theoretical expectations are based may be a small if distinct group of clients (Koss, 1979). Of course, somewhat facetiously, from a methodological point of view it is much easier to gather data from clients who choose to remain in therapy (i.e., they are available for data collection purposes). Typically these clients share a middle or upper class value system, are quite verbal and introspective. For these clients, the therapeutic relationship has traditionally been portrayed as one where the psychotherapist, on an olympian pedestal, wields great power over the psychological, economic and social fortunes of the patient. The therapeutic alliance as thus conceived is a partnership among unequals. In this situation it is quite probable that the goals of treatment whether overtly or covertly stated are those of the psychotherapist. These commonalities bias the data in ways which preclude generalization of the results to a wide range of clients and settings.

There is evidence that outpatient clients and therapists differ significantly in their views of the amount of commitment required and the duration of treatment desired. In a study by Hornstra et al. (1972), the clients most favored treatment plan was "talk as needed" while clinicians favored longer-term treatment. Cultural factors also play a significant role in some communities where premature termination may be a culturally

appropriate response and may be evidence of increased coping because "only crazy people stay longer". One might conclude that there is incongruity between the expectations harbored by a therapist who may yearn to address complex issues of personal growth that are simply not part of the client's agenda for symptom amelioration/reduction.

Other reasons for early termination are addressed in studies by Garfield (1978) and Acosta (1980) which indicate that environmental factors sometimes impede clients' ability to continue in therapy (babysitting needs, time away from work, competing economic priorities). It may be that low income and minority clients, who constitute a large proportion of the CMHC clientele, encounter more environmental difficulties in continuing therapy than would more economically advantaged clients thus providing an impetus for early termination. In both the Garfield and Acosta studies, a major reason given by clients across all groups for discontinuing therapy was a sense of improvement. While their mental health status on follow-up was not assessed, it appears from the clients' own reports that they terminated treatment simply because they felt better and felt that they had solved their problems.

In a similar study, Pekarik (Note 5) found that for CMHC clients who had terminated early, 49% stated that they no longer felt distressed. It is of interest to note that without their communication of improvement to the therapists, these clients may have been seen as treatment failures by therapists. In trying to determine whether these clients were truly no longer in need of services, Pekarik noted that therapists tended to classify moderate levels of symptoms as needing treatment while clients do not share that

perception. Thus it would appear that therapists have higher or different standards for success than do clients.

It is likely that differential expectations regarding the course of therapy may be related to patterns of client usage (Littlepage, Kosloski, Schnelle, McNees, & Gendrich, 1976). Such findings impugn the validity of the long-held assumption that clients who terminate after a small number of contacts automatically constitute treatment failures. An alternative hypothesis can be abstracted from the findings of Hornstra et al. (1972). It may be that clients terminate because they, in fact, feel better and/or their goals have been met. For these clients, the CMHC system has provided a valuable and efficacious service. Thus, one could speculate that for some clients the problem of early termination is not a problem at all—rather, brief attenders may drop out because they have improved sufficiently so as not to feel the need for further treatment. Since most outpatient clients pay for their own therapy, it is certainly logical that clients would structure the course of therapy to meet their own needs. In this situation, the client is "in a most personal and subjective sense, the ultimate judge of the treatment outcome" (Strupp & Hadley, 1977, p. 188).

While early termination may signal positive gains for the client, the dilemma of early termination oft-remains problematic for therapists (and for their administrators) who in the absence of feedback to the contrary, assume that early termination represents treatment failure. This discrepancy between therapists' and clients' perceptions is not unique to the area of psychotherapy outcome research alone. Substantial discrepancies between professionals' and lay persons' attributions about the nature of problems has been noted by Batson, O'Quinn and Pych (1982) and Pelton (1982). Similar discrepancies

have been reported in the area of perceived helpfulness by Elliott, Stiles, Shiffman, Barker, Burstein, and Goodman (1982), and Gurman (1977). Although the research on clients' perceptions has been sparse, the results have been remarkably consistent in demonstrating that client ratings are as good or better predictors of psychotherapy outcome than the judgements made by therapists (Lambert, DeJulio, & Stern, 1978). Some of the arguments presented earlier suggest substantial validity for clients' perceptions. Thus although clients' perceptions are not immune to such influences as situational attribution tendencies or self-defensive biases (Wills, 1982) it is clear that measures of how clients' perceive the outcome of psychotherapy should be an integral part of psychotherapy outcome research and of research on helping behavior.

Hypotheses

Borrowing from psychopharmacological research, a recent study (Howard, Kopta, Orlinsky, & Krause, Note 6) employed as the criterion for deciding when a patient should be included in the treatment group, that dosage at which 50% of the patients show some response (improvement). Having reviewed data for 2785 clients of psychiatric clinics, Howard et al. concluded that clients have received the treatment after having attended six to eight sessions. Clients who attended less than six to eight sessions were not considered to have been effectively exposed to the treatment. For the purposes of the present study, early termination will be defined as dropping out of treatment before the sixth session. Alternatively, clients who have

attended 6 to 24 sessions will be considered to have received the treatment, brief psychotherapy.

Howard et al. also concluded that 75% of clients improve by the 26th session and that in an average client sample, maximum therapeutic benefit would be achieved for 85% of the sample in approximately 52 weekly sessions. Thus outcomes were consistent with the "more is better" theme of psychotherapy research. The present study will test the corollary assumption that clients who have relatively few contacts are necessarily unchanged or have experienced negative effects.

Given that there are observable differences between the expectations of the client, clinician, agency and researcher, one might conclude that research efforts should focus on whether services rendered in a CMHC outpatient program have a positive impact on the clients for whom this system of affordable mental health service delivery was designed. In an effort to clarify the issues surrounding the significance of early termination in CMHCs, the present study will focus on the following hypotheses:

- (1) Overall effect - clients who receive service in an outpatient CMHC setting will report an increase in adjustment/functioning from the level reported at intake to the adjustment/functioning level reported at termination,
- (2) Early termination effect - clients who are early terminators (less than 6 sessions), will report an increase in adjustment/functioning from the level reported at intake, and
- (3) Brief therapy termination effect - clients who remain in brief

psychotherapy (6-24 sessions) will report a pattern of change in adjustment/functioning that is better than that reported by clients who are early terminators (less than 6 sessions). These differences are expected to demonstrate that therapeutic outcomes are positively associated with the amount of treatment.

METHOD

Participants

Participants were clients who were accepted for outpatient treatment in the adult outpatient program of the Edgewater Uptown Community Mental Health Center (EUCMHC) between February 1982 and March 1983. Most of the participants were seeking personal growth therapy and evidenced an adequate level of functioning in that they did not require hospitalization or sheltered care. Only those clients for whom research data was available at intake and at least one subsequent session were included for purposes of the study.

Materials

The outcome instrument consisted of three scales taken from the Profile of Adaptation to Life (PAL-C) developed by Ellsworth (1979). The PAL-C is designed to measure both positive and symptomatic aspects of coping with daily living. The Clinical form (PAL-C) is a 41-item self-report inventory for evaluating the pre and post treatment adjustment of adults in seven areas established by factor analysis. These include:

- (1) Negative Emotions;
- (2) Psychological Well-Being;
- (3) Physical Symptoms;
- (4) Income Management;
- (5) Alcohol/Drug Use;

(6) Close Relationships; and

(7) Relationship to Children.

Reliability. Ellsworth reported the intercorrelations among the PAL dimensions. Scores on the Negative Emotions scale correlated with those on the Psychological Well-Being scale ($-.67$ for females and $-.58$ for males). Scores on the Negative Emotions scale correlated with those on the Physical Symptoms scale ($.57$ for women, $.58$ for men). Scores on the Well-Being scale correlated with those on the Physical Symptoms scale ($-.53$ for women, $-.45$ for men).

Using 154 items that measured adjustment and functioning, a series of factor analyses (Varimax rotation with commonality estimates in the diagonals) was undertaken to identify dimensions of adjustment common to various subgroups (i.e., males and females, clinical and non-clinical populations). The reliability of the PAL factor scores was estimated by calculating the internal consistency (coefficient Alpha). All PAL dimensions had reliabilities above $.80$.

The test-retest reliability of PAL self ratings are reported by Ellsworth to be high. Items that did not have a test-retest reliability of $.80$ or more were not included.

Validity. In terms of discriminant validity, PAL dimensions of Negative Emotions, Psychological Well-Being and Physical Symptoms differentiated best

of the seven PAL dimensions among six different groups having F ratios of 236, 136 and 53 respectively.

PAL scores were able to differentiate the pre and post treatment adjustment of a clinical population. The t-test for correlated means was significant at the .01 level for the dimensions of Negative Emotions, Psychological Well-Being and Physical Symptoms.

The concurrent validity of the instrument was tested by comparing clients' perceptions of their own pretreatment functioning with ratings by significant others. The PARS (Ellsworth, 1979) was used to obtain the ratings of significant others. The PAL self-ratings demonstrated a mild to moderate agreement with the PARS ratings—a finding which is consistent with expected self-reports of internally-felt states.

Scale selection. The selection of the scales for inclusion was based on two criteria:

- (a) relevance for measuring adjustment domains for this treatment population and
- (b) demonstrated sensitivity to pre-post treatment change.

In regard to (a) several scales were not relevant to the adult outpatient population served by the EUCMHC program. The Alcohol/Drug Use scale was eliminated because clients with substance abuse problems are routinely assigned to a different program. The Income Management and Relationship to Children scales were eliminated because most clients are on

Public Assistance or unemployed and approximately 50% of the clients do not have children.

In regard to (b), Ellsworth's own data regarding the validity of the scales demonstrated that the scales measuring Negative Emotions, Psychological Well-Being and Physical Symptoms were best able to differentiate between clinical and non-clinical populations (Ellsworth, 1979). Additionally, a previous study had shown that the Close Relationship, Income Management and Alcohol/Drug Use scales did not demonstrate sensitivity to pre-post treatment change in a CMHC setting (McLean, Note 6).

Thus the outcome instrument consisted of the following scales from the PAL-C: Negative Emotions, Psychological Well-Being and Physical Symptoms. The outcome instrument subsequently referred to as the Brief PAL is attached as the Appendix.

Procedure

The Secretary asked clients of the adult outpatient program to complete the Brief PAL as part of the initial data collection procedure at the intake session. She indicated that she was available to answer questions if necessary in order to assist the client in filling out the form. On subsequent visits the Brief PAL was handed to the client for completion prior to the therapeutic session at the 2nd, 4th, 6th, 12th, and 24th treatment sessions.

The following information was gathered from the clinical record for purposes of data analysis: length of stay, number of kept and failed or cancelled therapy sessions, client's age, marital status, educational level, employment status, whether there was a history of previous mental health treatment, sex of the primary therapist and assigned diagnoses on Axis I and Axis II. Axes I and II include all of the mental disorders. Two classes of mental disorders, Personality Disorders and Specific Developmental Disorders, are assigned to Axis II; all other mental disorders are assigned to Axis I (American Psychiatric Association, 1980).

Characteristics: Population Sample

In order to gauge the generalizability of this study to outpatient clients in similar settings, it is important to describe the major characteristics of this sample. Consequently frequency distributions and measures of central tendency were obtained for variables noted from the clinical record and for others salient to the purposes of this study.

Frequency distributions for demographic variables are presented in Table 1. The client sample was 43.5% male and 56.5% female with a mean age of 31 years. Seventy percent of the clients were Caucasian, 25% were Black, and 5% were of another racial background. Fifty-three percent of the clients were single, 21% married and 25% divorced or separated. Fifty-six percent of the clients had at least some college education; 43% had full-time employment while 40% were on Public Assistance or unemployed. In terms of diagnostic assessment, 66.4% of the clients were diagnosed with either a neurosis or adjustment disorder while 27.4% were diagnosed with a personality disorder. Forty-three percent had no previous mental health treatment while 44% had been involved in outpatient treatment before and 13% had a history of both inpatient and outpatient mental health treatment.

The mean length of treatment was 122 days from intake to the the final session. The mean number of sessions was 11.6 while the median number of sessions was 8. The median number of sessions is higher than that reported in the literature (median varies between one and six sessions depending on the study cited with a modal number of four sessions) because

TABLE 1

FREQUENCY DATA: DEMOGRAPHIC VARIABLES

Variables	<u>N</u>	%
Sex		
Male	57	43.5
Female	74	56.5
Age		
18-25 yrs.	40	30.5
26-33 yrs.	52	39.7
34-41 yrs.	63	17.6
42-49 yrs.	08	06.1
50-59 yrs.	08	06.1
Race		
White	92	70.0
Black	32	25.0
Other	07	05.0
Marital Status		
Single	70	53.4
Married	27	20.6
Divorced	17	12.9
Separated	16	12.2
Other	01	00.7
Educational Level		
Less than 12 yrs.	25	19.0
12 yrs. (H.S.)	32	24.4
More than 13, < 16 yrs.	50	38.1

TABLE 1 Continued

FREQUENCY DATA: DEMOGRAPHIC VARIABLES

Variables	<u>N</u>	%
16 yrs.	16	12.2
More than 16 yrs.	08	06.1
Employment Status		
Full-time	57	43.5
Part-time	06	04.5
Student	10	07.6
Public Assistance/Unemployed	53	40.4
Housewife	05	03.8
Diagnosis		
Neurosis/Adjustment Disorder	87	66.4
Personality Disorder	36	27.5
Psychosis	00	00.0
Other	08	06.1
Previous Mental Health Treatment		
None	55	42.7
Outpatient only	51	44.3
Inpatient and outpatient	14	13.0

these figures include the clients who attended an intake session and did not return subsequently. For purposes of the present study clients were included only if they attended both the intake and at least one subsequent sessions, thus accounting for why the median number of sessions is higher than might be expected.

The results of analyses which are presented in Table 2 describe the number of sessions in treatment for the 120 clients who participated in the study. The results show that of the total, 22.5% had attended 2 or 3 sessions, 17.5% had attended 4 or 5 sessions, 22.5% had attended 6 to 11 sessions, 15.8% had attended 12 to 23 sessions and 21.7% had attended at least 24 sessions. Thus 40% of all clients remained in treatment for less than six sessions.

The mean number of cancelled/failed appointments was 2.9 and the mean percentage of canceled/failed to total appointments (C/F rate) was 18.2%. The C/F rate is shown in Table 3 for each session at which the Brief PAL was completed. The C/F rate for clients who remained in treatment for 2 or 3 sessions was 16.5%, for 4 or 5 sessions was 24%, for 6 to 11 sessions was 23%, for 12 to 23 sessions was 17.9% and for at least 24 sessions was 11.7%.

The mean and standard deviations for the number of days between the initial session and the completion of the final Brief PAL are presented in Table 4. The standard deviations for clients who completed the final Brief

TABLE 2
FREQUENCY DATA: NUMBER OF SESSIONS
IN TREATMENT

Number of sessions in treatment	<u>N</u>	Absolute percentage	Cummulative percentage
2-3 sessions	27	22.5	22.5
4-5 sessions	21	17.5	40.0
6-11 sessions	27	22.5	62.5
12-23 sessions	19	15.8	78.3
24+ sessions	26	21.7	100.0

TABLE 3
PERCENTAGE OF CANCELED/FAILED TO TOTAL
APPOINTMENTS BY NUMBER OF SESSIONS IN TREATMENT

Number of sessions in treatment	Mean percentage of cancelled/ failed to total appointments
2-3 sessions	16.5
4-5 sessions	24.0
6-11 sessions	23.0
12-23 sessions	17.9
24+ sessions	11.7

TABLE 4

MEAN AND STANDARD DEVIATION OF LENGTH OF STAY
BY NUMBER OF SESSIONS IN TREATMENT

Number of sessions in treatment	<u>M</u> days	<u>s.d.</u>	<u>N</u>
2-3 sessions	38.7	36.5	27
4-5 sessions	66.4	40.6	21
6-11 sessions	113.5	61.6	27
12-23 sessions	183.0	61.3	19
24+ sessions	218.5	53.9	26

PAL at either the 2nd, 4th, or 6th session, are quite large and thus reflect a broad range for length of stay in these treatment groups.

Scale intercorrelation

Since the Brief PAL is composed of three subscales it is important to note the interrelationship between the responses given in the areas of psychological adjustment, interpersonal relations and physical health. At intake the participants' scores on Psychological Well-Being were negatively correlated with their scores on Negative Emotions, $r(130) = -.28$, $p < .001$, and on Physical Symptoms, $r(130) = -.17$, $p < .05$. This means that participants who had a high score in the area of psychological adjustment tended to have low scores in the areas of negative emotions and physical symptoms. Scores on Negative Emotions were moderately correlated with Physical Symptoms, $r(130) = .30$, $p < .001$. This means that participants who had high scores on the Negative Emotions scale also tended to score high on the Physical Symptoms scale. Similarly, participants who were relatively free of negative emotions (low score) tended to have fewer physical symptoms.

Measurement Concerns

The statistical methods available for assessing the statistical significance of changes in groups over time either ignore or only partially account for initial (pretreatment) level. Thus a number of concerns have been raised regarding the analyses of change over time. For instance, the simple gain or change score, calculated by subtracting the pretreatment score from the outcome score, tends to be unreliable because: (a) the error component in the pretreatment and in the final score is compounded by measuring the difference; (b) because ceiling effects distort interpretation at

the higher score levels; and (c) because both scores are vulnerable to the measurement bias known as regression toward the mean.

In light of these difficulties, Fiske et al., (1970) and Manning and DuBois (1962) recommend the residual gain score. According to Mintz, Luborsky and Christoph (1979):

The residual gain score takes into account the extent to which the amount of raw gain is linked to initial level...The residual gain is a statistically adjusted measure which rescales an individual's simple gain score relative to typical gains made by others at the same initial level...A possible drawback of these methods lies in their relative complexity. The dependent variables analyzed are derived statistically and they often differ substantially from the actual raw data because of the "adjustments" for initial level. Interpretation of such analyses is therefore relatively difficult. (p. 321)

However, Judd and Kenny (1981) present the argument that change scores are more valid than residualized change scores because "regression adjustment leaves bias in the treatment effect and the bias may be greater than the readjusted analysis of the posttest alone (Reichardt, 1979)". (p. 110)

Presenting a different concern, Newman (Note 9) suggests that the residual gain score can be used only if there is no interaction of the main effects of the independent variables and the influence of time.

These dilemmas prompted Cronbach to quote Lord who stated: "There simply is no logical or statistical procedure that can be counted on to make proper allowances for uncontrolled pre-existing differences between groups", and to be unequivocal in his own conclusion that "What cannot be done is to interpret the difference in means, adjusted or unadjusted, as a treatment effect." (Cronbach, Gleser, Nanda, & Rajaratnam, 1972, p. 339)

Thus in terms of choosing analyses that would be most appropriate, it was imperative to know the characteristics of the sample distribution especially as they relate to whether scores are normally distributed (an assumption of the regression analysis that underlies the residual gain score) and whether outcome scores are independent of pretreatment levels.

Characteristics: Sample Distribution

In order to select appropriate analyses it was important to know how the pretreatment and final outcome scores were distributed. Figure 1 shows that the pretreatment scores as well as the final outcome scores appear balanced, cluster in the middle range and are less frequent in both the upper and lower tails. It would appear that these distributions could have come from a normal distribution.

Pretreatment and outcome scores were available for five treatment groups: clients having completed the final Brief PAL at the 2nd, 4th, 6th, 12th, and 24th session of treatment. An analysis of variance was done to determine whether the pretreatment scores varied as a function of the number of sessions in treatment. These results indicate that mean pretreatment scores (Table 5) of the various groups did not differ from one another, $F(4,114) = .61$, n.s. Neither is it possible to predict the number of sessions in treatment from the pretreatment scores on any of the three subscales; Negative Emotions, $F(4,114) = .35$, n.s., Psychological Well Being, $F(4,114) = .38$, n.s., or Physical Symptoms, $F(4,114) = .39$, n.s.

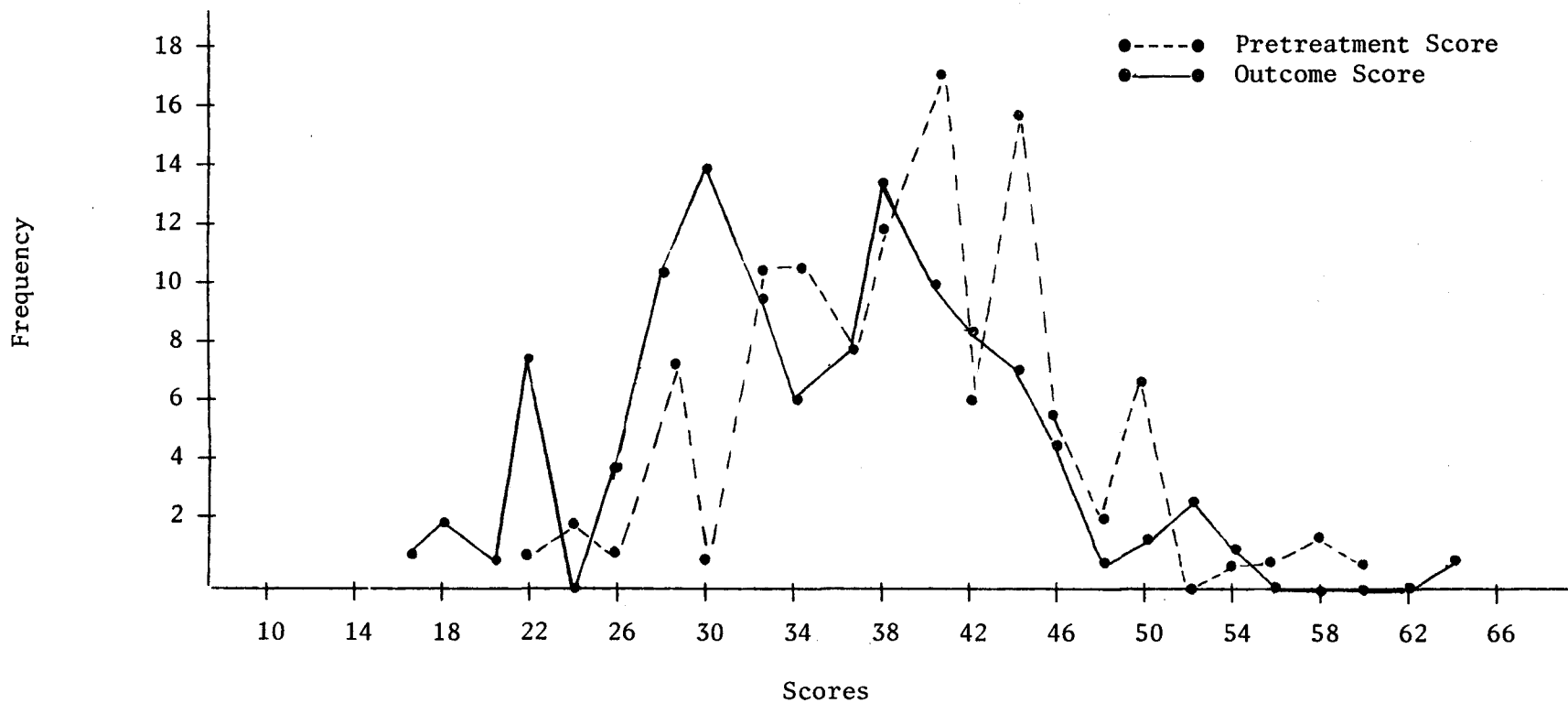


Figure 1. Frequency Distribution of Pretreatment and Outcome Scores

TABLE 5
MEAN PRETREATMENT SCORE BY NUMBER OF
SESSIONS IN TREATMENT

Number of sessions in treatment	<u>M</u>	<u>s.d.</u>	<u>N</u>
2-3 sessions	39.9	5.5	27
4-5 sessions	42.4	8.2	21
6-11 sessions	39.1	7.8	27
12-23 sessions	39.9	8.3	19
24+ sessions	40.0	8.3	25

Elashoff (1970) has suggested that when the correlation of pretreatment scores with outcome scores is less than .40 that it may be advisable to block the pretreatment scores in order to better delineate the changes over time. Thus correlational analyses were done to examine the relationship of pretreatment scores to the outcome scores. The results (Table 6) show that the pretreatment score was significantly correlated with the outcome for those clients who completed the final Brief PAL at the 2nd, 4th or 6th session of treatment. This correlation is to be expected since the scores (pretreatment and outcome) occur so closely in time. Given that outcome is not independent of pretreatment score, the assumption of independence is violated and thus the use of residual gain scores to analyze this clinical data would not be justified.

The pretreatment scores were not significantly correlated with outcome scores for those clients who completed the Brief PAL at the 12th or 24th session where the effect of time would be expected to be more diffused. Although the relationship between pretreatment level and outcome for those clients who completed the final Brief PAL at the 2nd, 4th or 6th session is confounded and therefore not clear, one might tentatively conclude that for treatment groups of 12 or 24 sessions, the outcome is independent of the pretreatment level and therefore analyses pertaining to the 12th or 24th session in particular, should be blocked.

Analyses of Hypotheses

TABLE 6

CORRELATION OF PRETREATMENT SCORE WITH OUTCOME
SCORE BY NUMBER OF SESSION IN TREATMENT

Number of sessions in treatment	Correlation of pretreatment score with outcome score
2-3 sessions	.52*
4-5 sessions	.66*
6-11 sessions	.46*
12-23 sessions	.28
24+ sessions	.34

* $p < .05$

Overall Treatment Effect. A correlational analysis was performed to assess whether therapeutic treatment was related to overall improvement. The correlation across all clients between the pretreatment score and the outcome score was significant, $r(115) = .43$, $p < .0001$. In other words the outcome score typically reflected a positive gain over the pretreatment score. The mean raw scores at intake and termination for each treatment group are presented in Table 7. The mean change scores are graphed in Figure 2. These results reflect not only that there is an overall improvement, but that the clients in each treatment group report positive therapeutic gains.

Further, the mean course of treatment for each group is displayed in Figure 3. The graph indicates that there is a general pattern of improvement over time for each treatment group although more limited gains are achieved by clients who completed the final Brief PAL at either the 2nd or the 4th session. However, an analysis of variance demonstrated that overall, the outcomes were not statistically different, $F(4,108) = .85$, n.s.

An effect size, which is a measure of the magnitude of the treatment effect, was calculated for each treatment group by taking the difference between the mean pretreatment score and the mean outcome score and dividing it by the pooled error of the means for each treatment group. The results are presented in Figure 4.

Given Elashoff's recommendation that blocking on the pretreatment scores may help clarify how the scores change over time, a more detailed analysis of the relationship between pretreatment score, number of sessions in treatment, and outcome score was done by dividing (blocking) the pretreatment scores in each treatment group into one of two categories

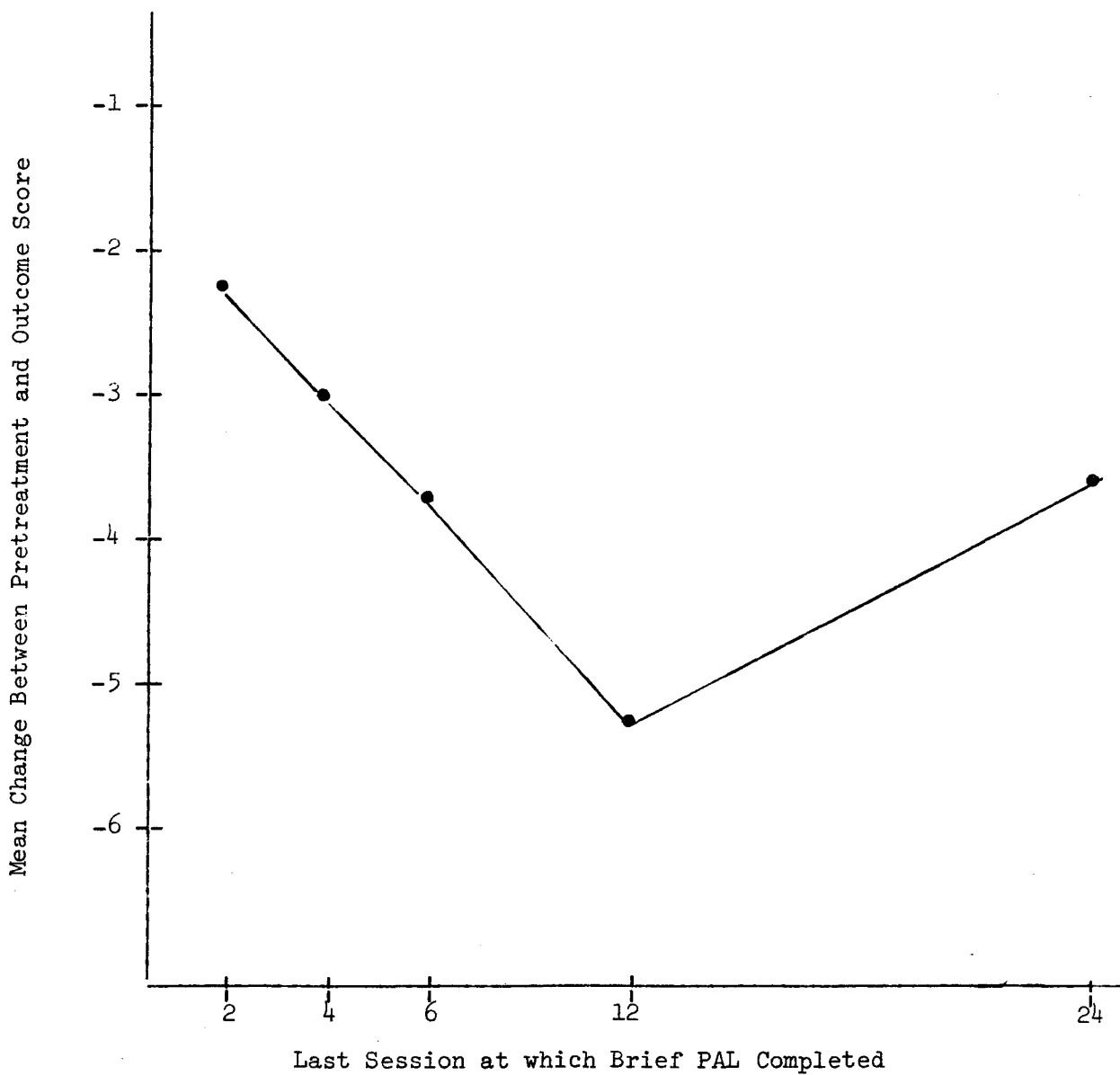


Figure 2. Mean Change Between Pretreatment and Outcome Score for Each Treatment Group. (Negative values indicate positive change)

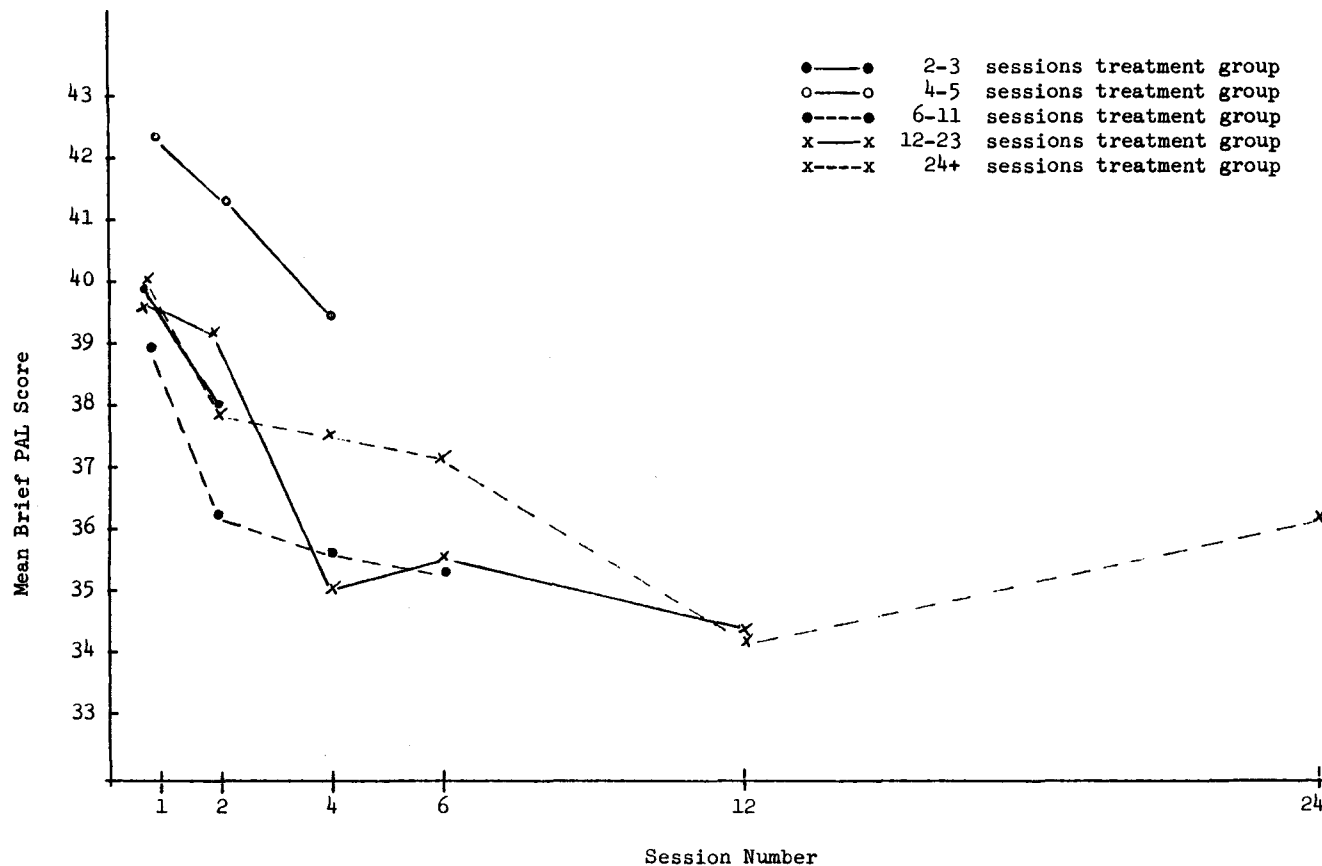


Figure 3. Mean Brief PAL Score by Session for Each Treatment Group. (Lower Brief PAL scores indicate positive change)

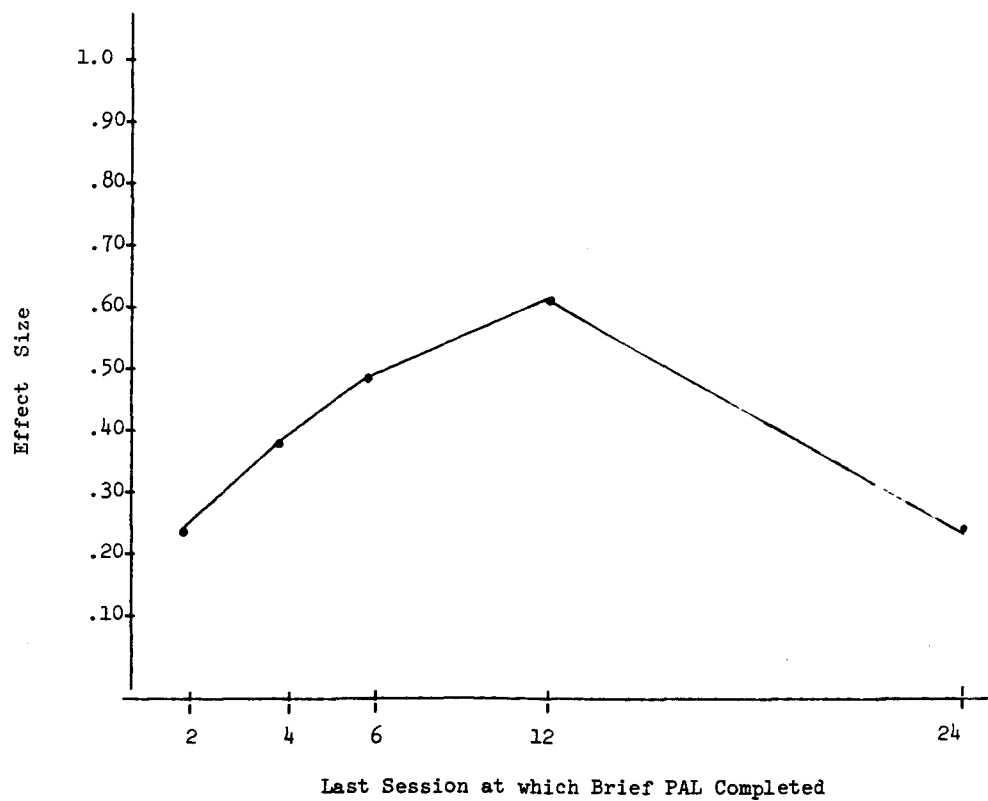


Figure 4. Effect Size for Each Group.

based upon their scores on the Brief PAL. The mean pretreatment score overall was 40, so pretreatment scores 40 or greater were labeled "high distress" while those pretreatment scores less than 40 were labeled "low distress". This categorization allowed an analysis of whether outcome varied with level of distress (low or high) across the five treatment groups (final Brief PAL completed at the 2nd, 4th, 6th, 12th or 24th session).

Although the results of the overall analysis of variance were not significant, $F(9,108) = 1.44$, n.s., there are some interesting patterns of change that can be gleaned by examining graphs of the means of these different groups. Overall, clients who reported higher levels of distress at Intake had more positive outcomes than those who had reported lower levels of distress at Intake. The scores for the "high distress" and "low distress" groups are graphed as Figures 5 and 6 respectively. The mean pretreatment score for those who reported higher distress was 45.2 while the mean outcome score for this group was 39.2. In contrast, the mean pretreatment score for those who reported a lower level of distress was 33.6 while the mean outcome score for this group was 33.8 (a slightly more negative score than that reported initially). Thus there is a general tendency for clients who report pretreatment scores of high distress to make greater therapeutic gains than those demonstrated by clients who report lower pretreatment levels of distress. In fact Figure 5 shows that while the former group reports rather dramatic mean change across all treatment groups, Figure 6 shows that the latter group demonstrates very limited mean therapeutic change across all treatment groups.

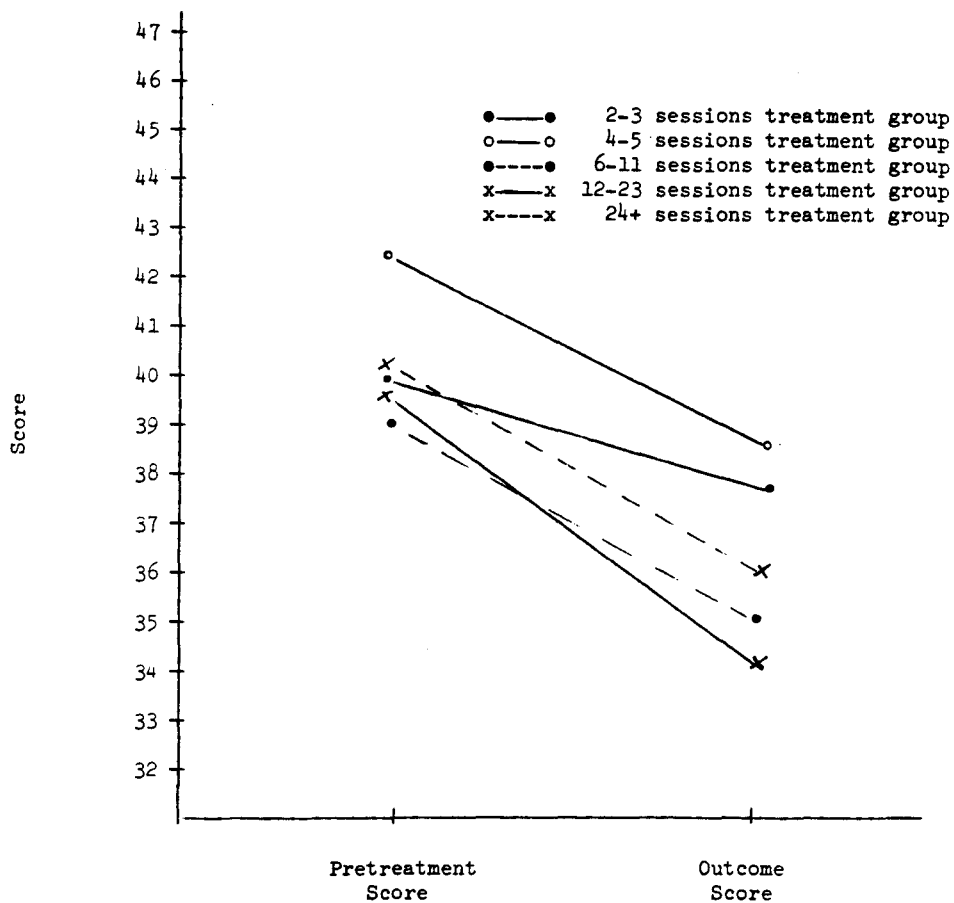


Figure 5. Pretreatment and Outcome Scores for those Participants Who Reported "High" Levels of Distress at Intake within Each Treatment Group. (Lower values indicate positive change)

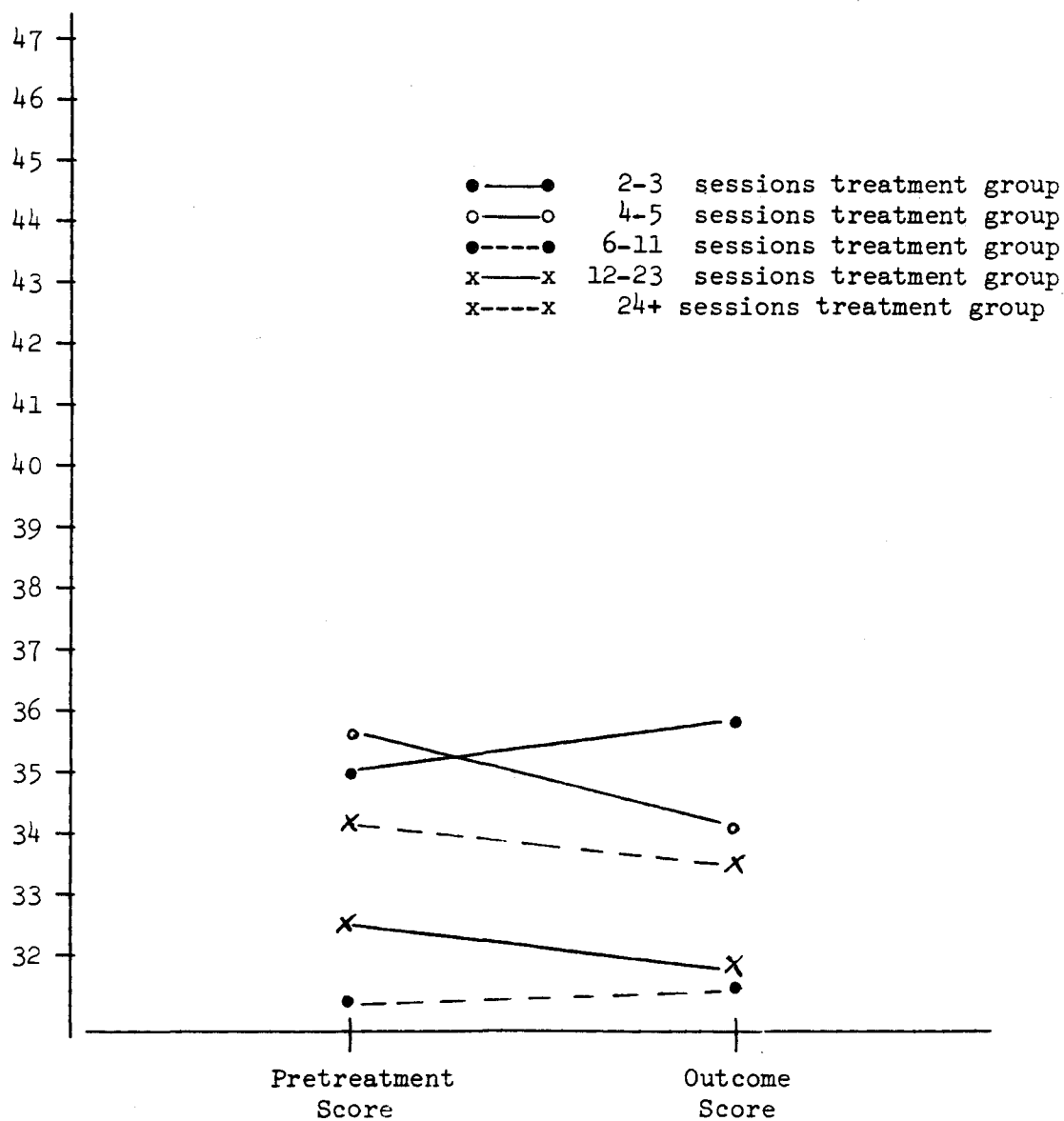


Figure 6. Pretreatment and Outcome Scores for those Participants Who Reported "Low" Levels of Distress at Intake within Each Treatment Group. (Lower values indicate positive change)

Early Termination Effect. In order to describe the relationship between number of sessions in treatment and the outcome of psychotherapy for early terminators, the raw change scores from Table 7 are graphed for those who terminated before the 6th treatment session in Figure 7. Clients who terminated after the 2nd or 3rd session made an average positive change on the outcome instrument of 1.8 units. Similarly those who terminated after the 4th or 5th session made an average positive change of 3 units. Analyses reported in Table 8 indicate that the change noted for those clients who attended 4 or 5 sessions is significant, $t(20) = -2.04$, $p < .05$.

Brief Therapy Termination Effects. Given the recommendation proffered by Elashoff (1969), an analysis of variance was performed on the scores of the clients where the last Brief PAL was completed at the 12th or the 24th session blocked by initial level of distress (high or low). The results, $F(1,40) = .24$, n.s., indicate that the outcome score is not significantly different for those clients seen for 12 - 23 sessions ($M = 34.6$) and those seen for 24 or more sessions ($M = 36.5$). Similarly, the outcome scores were not significantly different, $F(1,40) = .93$, n.s., based on whether the initial level of distress was high ($M = 37.3$) or low ($M = 33.7$).

Clients who terminated between the 6th but before the 12th session made an average positive change of 3.8 units, while those who terminated between the 12th but before the 24th session made an average positive change on the outcome instrument of 5.3 units. Similarly those who terminated after 24 or more sessions made an average positive change of 3.5 units. Analyses reported in Table 8 indicate that the changes noted for the 6 - 11 session group and for the 12 - 23 session group are significant, $t(26) = -2.37$, $p < .025$ and $t(18) = -1.95$, $p < .05$ respectively while the change

TABLE 7

THE MEAN PRETREATMENT AND OUTCOME SCORE AS A
FUNCTION OF NUMBER OF SESSIONS IN TREATMENT

Number of sessions in treatment	<u>M</u> pretreatment score	<u>M</u> outcome score	<u>M</u> difference*
2-3 sessions	39.9	38.1	-1.8
4-5 sessions	42.4	39.4	-3.0
6-11 sessions	39.1	35.4	-3.7
12-23 sessions	39.9	34.6	-5.3
24+ sessions	40.0	36.5	-3.5

* negative values indicate positive change

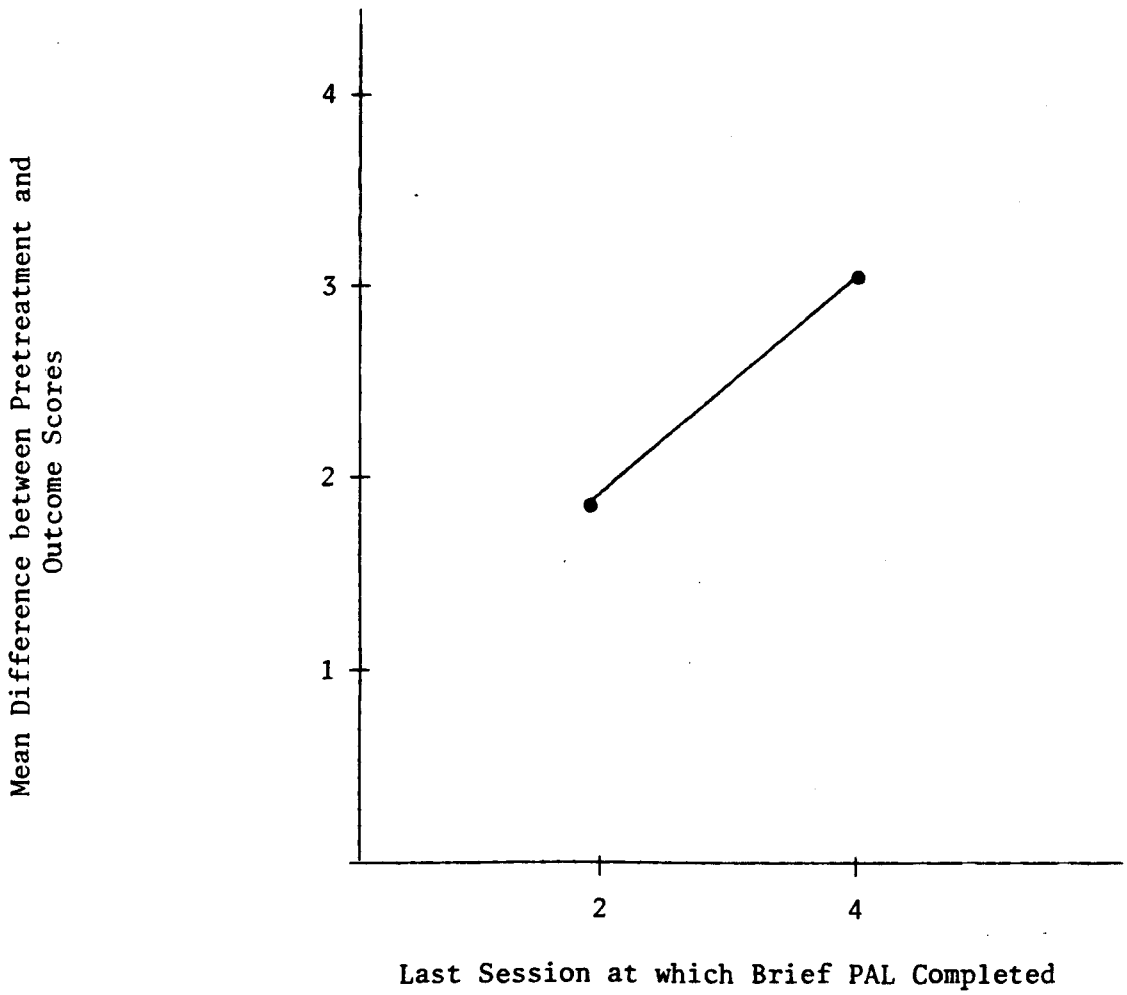


Figure 7. Mean Difference Between Pretreatment and Outcome Score for Early Terminators

TABLE 8
COMPARISON OF PRETREATMENT AND
OUTCOME SCORES BY NUMBER OF SESSIONS

Number of Sessions	<u>M</u> Pretreatment Score	<u>s.d.</u>	<u>M</u> Outcome Score	<u>s.d.</u>	<u>N</u>	<u>t</u> Value	One-tailed Probability
2-3 sessions	39.9	5.5	38.1	8.7	27	-1.31	.10
4-5 sessions	42.4	8.2	39.4	8.0	21	-2.04	.05*
6-11 sessions	39.1	7.8	35.4	7.8	27	-2.37	.025*
12-23 sessions	39.9	8.3	34.6	10.0	19	-1.95	.05*
24+ sessions	40.0	8.3	36.5	14.1	26	-1.34	.10

noted for the 24 or more sessions group is not significant, $t(25) = -1.34$, n.s.

In order to compare the patterns of change for the early terminators versus those who remained in brief therapy, the outcome scores, blocked for pretreatment level for the group of early terminators (2 - 5 sessions) and the brief treatment (6 - 24+ sessions) groups were analyzed. Results indicate that there were significant main effects. There was a significant difference between the outcome scores as a function of whether the initial distress was reported as "high" or "low", $F(1,114) = 8.92$, $p < .005$. Similarly there were differences between early terminators and those who remained in brief treatment, $F(1,114) = 2.9$, $p < .05$. Figure 8 reflects the fact that early terminators are different from those who remain in brief treatment in that early terminators report both higher levels of distress at intake and at termination than do those who remain in brief treatment.

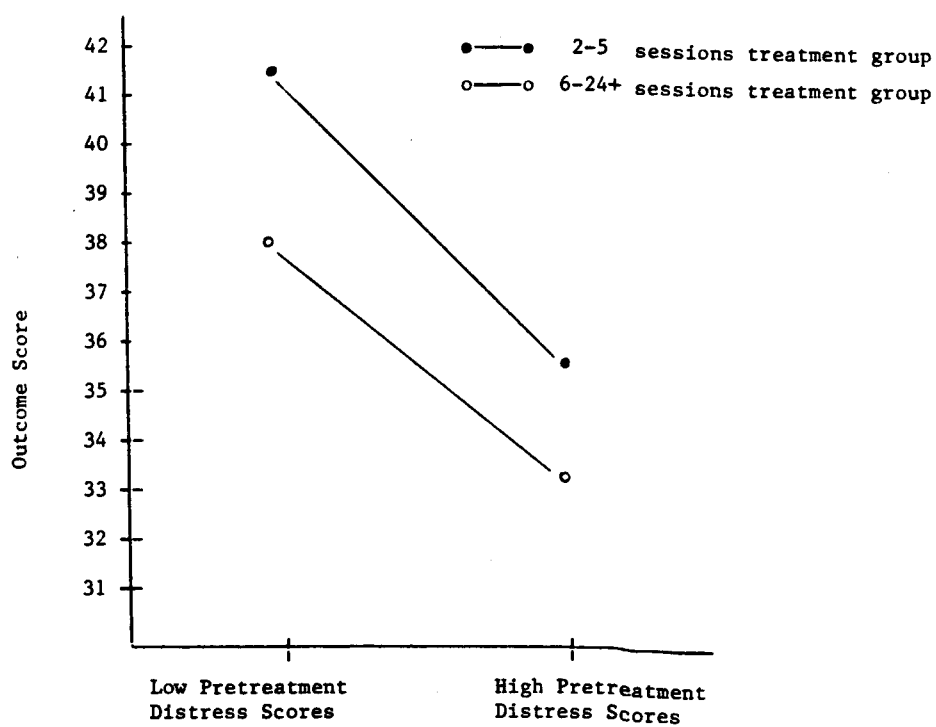


Figure 8 . "Low" and "High" Pretreatment Distress and Outcome Scores for Early Terminators and Those Who Remained in Brief Treatment. (Lower scores indicate positive change)

DISCUSSION

Reflections on the results

The questions addressed by this study can be summarized as the following:

- (1) Does therapeutic contact effect positive outcomes independent of number of sessions in treatment?
 - (2) Does therapeutic contact in the first 2 to 5 sessions effect positive outcomes?
 - (3) Does brief treatment (6 to 24 sessions) effect positive outcomes
- and how is this different for clients who might be termed early terminators?

In answer to (1) above, a striking feature of the analysis of the study is that regardless of number of sessions, clients reported improvement in their adjustment/functioning at the point of termination. The magnitude of the effect or "effect size" between treated and control subjects reported by Smith and Glass (1977) was .68 indicating that the average client receiving therapy was better off than 75% of the untreated controls. Given the effect sizes found for the five treatment groups, clients in the present study who were seen for 2 or 3 sessions could be expected to be better off than 59% of those same clients prior to those who were seen for 4 or 5 sessions could be expected to be better off than 64% of those same clients prior to treatment; those seen for more than 5 but less than 12 sessions could be expected to be better off than 68% of those same clients prior to treatment;

those seen for more than 11 but less than 24 sessions could be expected to be better off than 72% of those same clients prior to treatment; and those who attended 24 sessions or more could be expected to be better off than 61% of those same clients prior to treatment. Interestingly, in this study therapeutic gains were maximized for those clients who attended more than 11 but less than 24 sessions.

Regarding question (2) above, the analysis indicates that the early terminator typically makes positive gains and terminates treatment having experienced an improvement in adjustment/functioning. This finding lends increased support for the contention that the terms "premature terminator" and "psychotherapy dropout" (PT/PD) erroneously represent the course of treatment. In fact, it would appear that clients who terminate may be unspoken treatment successes. Given that 40% percent of the sample remained in therapy for 5 sessions or less, it is clear that many clients are unwilling or unable to spend more than a few weeks in therapy. In light of the fiscal and human resources that have been invested in the CMHC movement, it is reassuring that very brief exposure to psychotherapy will promote positive benefits or at least a return to an adequate, perhaps even healthy psychological equilibrium. However these results do not preclude the possibility that there is a subset of clients who terminate early in the therapeutic process because they have experienced no improvement or negative effects.

Recognizing the importance of making more precise delineations in order to distinguish short term therapeutic failures (PTs/PDs) from short term therapeutic successes (early terminators), Goodsitt (1981) recommended that a measure of therapeutic outcome be used in tandem with the length of stay

criterion in order to evaluate the outcome of psychotherapy. Given that community mental health services need to be responsive to the needs of clients, who as consumers of the service will continue to have a major impact on the course of treatment, it would seem essential that the clients' (consumers') viewpoint be a major barometer with which one judges the success of psychotherapy.

Regarding question (3) above, the results also demonstrate that clients who engage in brief psychotherapy experience a steady course of improvement over time. Given this trend it may be that the results are a conservative estimate of the adjustment/functioning at termination. Had the measure been completed by the client after the last treatment session rather than at the 6th, 12th or 24th treatment session, the outcomes reported might have been even more positive. In light of these findings and given the twofold reality that psychoanalytic dominance is on the decline and that brief therapy is most often the clients' treatment of choice, it may be increasingly important to emphasize the time-limited nature of treatment in order to focus the brief time that clients typically spend in therapy, most effectively.

A most intriguing finding is that independent of the number of sessions in treatment, clients who report a pretreatment level of high distress appear to make more therapeutic gains than do clients who report a pretreatment level of low distress. The treatment gains may be in part an artifact of statistical regression. Regression toward the mean occurs when participants are grouped on the basis of their extreme scores. Since all measures contain some component of "error", at any one testing some individuals will score artificially high and others artificially low. On a subsequent testing, their scores are likely to be closer to the mean. Thus when participants are

grouped on the basis of "high" or "low" distress, they may regress toward the mean with or without treatment.

Alternatively, it may be that clients who are experiencing great distress derive strong positive effects from therapeutic contact. If indeed outcomes are reflective of true treatment gains, then one might hypothesize that CMHC services are particularly valuable to persons experiencing high levels of distress since therapeutic contact ameliorates the distress such that the level of adjustment/functioning is higher at termination regardless of the number of sessions in treatment. These differences were gleaned only in analyses particularly designed to examine how outcomes might differ within the same treatment groups as a function of initial level of distress. Given the present findings, a similar approach in other research efforts is highly recommended.

As for the result that clients who begin at higher levels of adjustment/functioning terminate at higher levels than do those who begin at lower levels of adjustment/functioning, one is reminded of Garfield's (1978) declaration that it is clearly intuitive that the healthier client at the beginning is the healthier one at the end. However this observation attests only to the fact that the outcome score for one group may be more positive than for another group. The observation does not take into account the fact that one or more groups may make more accelerated or dramatic change over time. As noted above, a more complex approach to psychotherapy outcome research may provide increased clarification regarding the process of therapeutic change.

The fact that the amount of exposure clients experienced in the present study varied widely reaffirms the long-held belief that there is no "magic cure" in psychotherapy. It will probably be impossible to discover or isolate a type of brief psychotherapy that is universally effective for all clients. The more poignant and elusive question is "What dosage of psychotherapy yields maximum benefits?". The troubling aspect of this question is that in spite of the developments over the past 40 years which include the development of new psychotherapies and increased empirical investigation in the area of psychotherapy outcome research, the optimal amount of treatment for a particular client is still an unknown quantity.

However, there is an area equally as important for which the possibilities of discovery hold more promise. Having established that psychotherapy effects positive change over time one might pursue techniques and approaches that will make a statement regarding the durability of the therapeutic change. As little as we know about who and how clients change, we know even less about how and why therapeutic change endures. For instance are clients who are early terminators likely to seek additional therapeutic contact? Even more importantly, if additional therapeutic contact begins shortly after a course of brief treatment, the brief treatment may be nothing more than a disguised hybrid of long-term treatment. It would be important to have a better understanding of those factors which help facilitate clients who leave therapy to incorporate, maintain and even build upon those gains achieved in therapy. Likewise, an understanding of those factors which increase the probability of a relapse would add important knowledge to the psychotherapy outcome research armamentarium. However, to date they are rarely studied or even highlighted for clinical discussion.

Budman and Gurman (1983) have suggested that "in order to develop improved forms of brief therapy and in order to examine the 'time-efficacy' of such therapies, we should look more at the long-term benefits of short-term treatments" (p. 289).

Additional analyses, not directly related to the hypotheses of the study were undertaken in an effort to assess whether clients with more positive outcomes differed from those who experienced less positive outcomes in terms of the demographic characteristics that they bring to the therapeutic setting. Pearson product moment correlation and regression analyses were utilized to determine whether any of the demographic information available from the clinical record had a significant relationship to the outcome of psychotherapy. The analyses revealed no significant association between outcome and any of the archival variables tested. This lack of association might have been expected since independent variables such as sex, age, marital status etc. are at best, only indirectly related to outcome. Therapy does not occur in a social vacuum, in fact Frank (1979) maintains that a most significant aspect of outcome research is the world view of the society in which the therapy takes place. Many of the determinants of outcome are beyond the reach of the therapeutic dyad. So it is not surprising that in an analysis of a limited number of demographic characteristics that major sources of variance would be missed.

While these actuarial relationships have frequently been examined, there are those who suggest that the determinants of a positive therapeutic outcome lie not with actuarial relationships but in the personal qualities of the client, of the therapist and in their interaction. For instance Frank (1979) postulates that clients whose level of conceptualization is similar to

that of their therapists make more meaningful gains than those in which there was a mismatch of levels. Thus a promising aspect for study may be the degree of complexity with which persons conceptualize their subjective worlds.

Attributional bias and clinical decision-making : The interface

Given the pejorative assumptions underlying the labels "premature terminator" and "psychotherapy dropout", progress made by PTs/PDs as evidenced by the results of this study is consistently more positive in the clients' judgement than in the professionals' assessment. Of course there are those who might argue that the perceptions of professionals are more accurate. However literature reviews in this area (Goldberg, 1968; Mischel, 1968) seem to indicate that there is no difference in the accuracy of judgements between professionals and lay persons. Thus factors that may contribute to the negative bias of therapists' attributions are as yet poorly understood and constitute an important arena for further study.

Moreover, it is clear that the attitudes implicit in the training that helping professionals receive plays a crucial role since the negative bias of therapists' attributions is most probably a learned behavior. In fact, it may be that we teach the wrong model(s) of client/therapist responsibility thus accounting for the tendency to respond to difficulties in the therapeutic context by prescribing larger doses of the same treatment rather than considering what the alternatives might be. Consequently a major research thrust might assess whether different models are more successful than others

with special attention to whether models are more successful when they are congruent with the client's expectations about who is responsible for what.

McGovern and Newman generated hypotheses in this area. Recently (Note 8) they put forth a three-fold proposition:

(a) that clinicians espousing different theoretical orientations will display different conceptualization patterns which are unique to their theoretical orientation; (b) that these conceptualization patterns are associated with different patterns of utilization of service system resources and cost-outcome results; and (c) that the consistency of these tendencies for clinicians will be predicted by their adherence to the patterns of conceptualization which are typical of the espoused theoretical orientation. (p. 74)

Building on this proposition, McGovern (Note 8) generated a number of hypotheses using the model outlined by Brickman et al. (1982), the observations regarding the negative bias of clinician's attributions discussed by Wills (1982) and a cost-outcome framework which allows an analysis of the models in terms of their respective cost-effectiveness. Hypotheses such as these are the basic building blocks for the conceptual bridge that is so sorely needed between attribution and clinical research. Some of those hypotheses are outlined here in an effort to illustrate how therapeutic outcomes and clinical decision-making are inextricably related.

(1) If as Wills (1982) has observed, attributions of experienced clinicians are typified by a negative bias, then students and new graduates of the helping professions might be expected to evince an increasing tendency to make personalistic attributions over the period of academic preparation and practicum or internship training.

(2) Situational determinants will be highlighted by those therapists who adopt cognitive, behavioral or family systems models of

psychotherapy whereas personalistic attributions will be highlighted by therapists who adopt a psychodynamic approach.

(3) The stronger the tendency to highlight personalistic attributions, the more likely that treatment will be focused on individual psychopathology and the longer the recommended length of stay. Similarly the stronger the tendency to highlight conscious cognitive adult experiences with an orientation to the present, the more likely the treatment plan will be focused on the individual but with a moderate number of sessions. Finally, the stronger the tendency to highlight situational determinants the more likely the treatment plan may emphasize a multi-pronged approach targeting the individual's social, work and family network with a low to moderate number of sessions.

These hypotheses are directly translatable into patterns of clinical decision-making and treatment planning which are fundamental aspects of client care at community mental health centers.

(1) The treatment plan for clinicians who perceive clients as having low responsibility for problem origin but high responsibility for solutions will typically consist of a single modality over a long period of time. Thus clients who emphasize the importance of unconscious and oedipal factors will likely recommend individual therapy over a large number of sessions. This attributional approach should result in high costs of treatment.

(2) The treatment plan for clinicians (typically psychiatrists) who perceive clients as having little responsibility for problem origin and

solution will usually consist of a single modality over a short period of time. For example psychiatrists often utilize a pharmacological regimen with an outlook toward an eventual "cure" since their task is to "fix" the problem. This attributional approach should result in moderate costs of treatment.

(3) The treatment plan for clinicians who perceive clients as having high responsibility for problem origin and solution will typically consist of multiple modalities (extra-therapeutic and self-initiated activities) and treatment of a low to moderate duration of time. This attributional approach should result in low costs of treatment.

Psychotherapy outcome research : The new frontiers

In addition to the importance of linking attributional approaches to clinical decision-making, there are uncharted areas for further study in psychotherapy outcome research. There is a need to look in more detail at the relationship between number of sessions and outcome of psychotherapy. If research is to impact the decisions made regarding establishing empirical guidelines for third-party reimbursement of psychological services, then more specific questions need to be investigated. The mere fact that brief psychotherapeutic treatment is generally beneficial to clients and that there is a positive linear relationship between therapeutic benefits is not sufficient. Other questions for empirical study include; Is there a point in treatment beyond which there are diminishing returns? If there is a point at which a client receives maximum treatment benefit, how is this treatment stay related to the stay required for the client who wants to approach the limits of what

could be expected from psychotherapy? How much improvement can be expected from various lengths of treatment? Is there a failure zone for different types of pathology, for different types of clients or for different treatment modalities? Last, what is the optimum number of sessions for different clients in conjunction with different therapies? These and other similar questions will help establish length of stay criteria for outpatient mental health center clients and will be useful in directing quality assurance activities as well as third party reimbursement policies.

However, in their effort to answer these questions, researchers must not overlook the significant methodological/statistical considerations that plague the analysis of change over time. Cartwright, Kirtner and Fiske (1975) have reported the existence of a large common factor (a global outcome measure) for each of the respective perspectives in the therapeutic process. Outcome instruments of this caliber have yet to be developed. Additionally measurement methodology has been a neglected area. For example, although Waskow and Parloff (1975) published a catalogue of outcome measures with special emphasis on their content and source, there was no mention of the problems that have been studied extensively in educational settings regarding the measurement and analysis of change over time. In fact Cronbach and Furby (1970) lament the absence of any valid tools with which to measure change in groups over time. However discussions such as those by Mintz, Luborsky and Christoph (1979) and Newman and Sorenson (in press) highlight these issues and provide some guidance as to how to approach analyses when

the data do not meet the statistical assumptions that underlie more traditional analyses.

Ultimately we are confronted with the most difficult task of either developing psychotherapeutically powerful techniques which will effect large, and therefore easily detectable changes over time or developing powerful measurement techniques that are capable of detecting clinically significant change over time. Unless we have the tools that will either effect or measure the clinically significant changes attributable to psychotherapy, we remain vulnerable to those who would observe that there is a serious discrepancy between the ideal and practice, promise and performance of psychotherapy. However a two-pronged approach to psychotherapy outcome research—one which emphasizes outcome studies as well as the development of strong measurement tools—gives reason to believe that psychotherapy research will make considerably more progress in the future than it has in the past.

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APPENDIX

Name: _____

I.D.: _____

Date: _____

Session #: _____

B R I E F

P A L - C

INSTRUCTIONS: Please mark out answer to each question by making a ✓ in the box under your answer choice, like this ✓.

	ANSWER CHOICES			
	1	2	3	4
DURING THE PAST WEEK, HAVE YOU.... (Please answer each question)	Never	Rarely	Some Times	Often
1. Worried about something?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Felt gloomy, blue?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Been on edge, tense?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Felt uneasy, troubled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Been unhappy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>		

	ANSWER CHOICES			
	1	2	3	4
DURING THE PAST WEEK I' VE.... (Please answer each question)	Never	Rarely	Some Times	Often
6. Enjoyed talking with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Felt trusting of people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Found work useful and interesting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Been involved, interested in things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Felt needed and useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>		

	ANSWER CHOICES			
	1	2	3	4
DURING THE PAST WEEK, HAVE YOU....	Not Once	1-2 Times Per Month	1-2 Times Per Week	Almost Daily
11. Had headaches?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Felt hot, feverish?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Had spells of dizziness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Waken from sleep feeling tired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Had nauses (sick to stomach)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Taken medication for headache?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Taken medication for stomach?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>		

APPROVAL SHEET

The dissertation submitted by Joanne M. May has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Ph.D.

Feb. 26, 1984

Date


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